

CLAIMS

What is claimed is:

1. A system for simulating a production and/or processing machine comprising:
a first device for setting up at least one mechanical model of the machine;
a simulator for performing a mechanical simulation of the machine as well as for supplying simulation data; and
a second device for setting up a model of a controller or drive for the machine based on the simulation data.
2. The system of claim 1, wherein the system is adapted to design/plan/program the controller and/or drive of the machine.
3. The system of claim 1, wherein the first device is adapted to set up mechanical models of the machines as a graphic representation.
4. The system of claim 1, wherein the second device is implemented as an engineering system.
5. The system of claim 1, and further comprising a third device that generates a computer program for controlling the machine based on the model of the controller or drive.

6. The system of claim 1, and further comprising a graphic display for graphical illustration of the simulation data.
7. The system of claim 1, wherein the second device transmits data of the models that are set up by the second device, to the first device, which then generates an updated model based on the data of the control or drive models, which is in turn used to have the simulator repeat a mechanical simulation.
8. The system of claim 1, and further comprising a memory for storing information data for hardware components of the machine.
9. The system of claim 8, wherein the stored information data are provided in form of objects representing the corresponding hardware components.
10. The system of claim 9, wherein the objects assist the first device in setting up the mechanical model.
11. The system of claim 1, and further comprising an additional memory associated with the second device for storing images of the objects.
12. The system of claim 8, wherein the second device uses semantic contained in the information data to generate a computer program.

13. The system of claim 1, wherein the first device and the second device use the same variable names.
14. The system of claim 1, wherein the system receives data from and/or transmits data to the machine via an intranet and/or the Internet.
15. A method for simulating a production and/or processing machine, comprising the steps of:
generating a mechanical model of the machine;
performing a mechanical simulation of the machine to generate simulation data; and
generating a model of a controller or drive for the machine based on the simulation data.
16. The method of claim 15, and further comprising the step of designing/planning/ programming the controller or drive for the machine.
17. The method of claim 15, and further comprising the step of generating a graphic visualization of the mechanical model of the machine.
18. The method of claim 15, wherein the model of the controller or drive is set up to an engineering system.

19. The method of claim 15, and further comprising the step of generating a computer program for controlling the machine based on the model of the controller or drive.
20. The method of claim 15, wherein the simulation data are graphically displayed.
21. The method of claim 15, and further comprising the steps of updating the mechanical model based on data transmitted from the controller or drive model, and repeating the mechanical simulation.
22. The method of claim 15, and further comprising the step of storing information data for hardware components of the machine.
23. The method of claim 22, wherein the information data are stored in form of objects that represent a corresponding hardware components.
24. The method of claim 23, wherein the mechanical model is generated based on the objects.
25. The method of claim 23, and further comprising the step of storing images of the objects in an additional memory associated with a device that generates the control and/or drive model for the machine.

26. The method of claim 22, and further comprising the step of generating a computer program based on the semantic contained in the information data.
27. The method of claim 26, wherein variable names used when generating the mechanical model are identical to variable names used when generating the computer program.
28. The method of claim 15, and further comprising the step of receiving and/or transmitting data via an intranet and/or the Internet.
29. A computer program, residing on a computer-readable medium, for simulating a production and/or processing machine, the program comprising instructions for causing a computer to generate a mechanical model of the machine, perform a mechanical simulation of the machine to generate simulation data, and generate a model of a controller or drive for the machine based on the simulation data.